

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

Feb. 22, 1848.—Wm. Yarrell, Esq., Vice-President, in the Chair.

ADDITIONAL MEASUREMENTS OF THE RED CORPUSCLES OF THE BLOOD OF VERTEBRATA. No. 4. BY GEORGE GULLIVER, F.R.S.

A reference to the preceding numbers of these papers will be found in the Proceedings of the Zoological Society, October 14, 1845, p. 93, where are also tables of my measurements of the blood-corpuscles up to that date, with summary notices of the most remarkable results as to the size of those corpuscles in vertebrate animals. A note concerning the size of the blood-corpuscles of Birds is given in the same Proceedings for March 24, 1846: and numerous observations on the size, shape, and structure of the blood-corpuscles of Vertebrata are contained in my Notes to the edition of Hewson's Works, lately printed for the Sydenham Society.

The following measurements, like all my former ones, are expressed in vulgar fractions of an English inch, and for the sake of brevity, on this occasion the average sizes only are given: L.D. denotes the long diameter and S.D. the short diameter of the corpuscles. A few remarks may be now added to illustrate the bare figures.

After my observation (see Dublin Medical Press for November 1839, and Proceedings of the Zoological Society, No. CXV. p. 107) of the remarkable minuteness of the red corpuscles of the blood of the Napu Musk Deer, it was to be expected that the corresponding corpuscles in the other species of *Moschus* would have a similar character. Accordingly, in Stanley's Musk Deer I found those corpuscles almost as small; and in my late measurements, the average of which is now given, of the blood-corpuscles of the Meminna Deer, I could perceive no difference between them and those of the Napu Musk Deer.

In the books of physiology, before the observations just mentioned, the blood-corpuscles of the Goat used to be described as the smallest in the Mammalia (see Prevost and Dumas; and Müller, Physiology, tr. by Dr. Baly, 1838, vol. i. p. 101; Mandl, Anatomie Générale, 1843, p. 248); but to the list of animals in which I have already found those corpuscles still smaller, are now to be added the Meminna and two species of Brocket Deer.

In the Red Brocket Deer (a female) the majority of the blood-corpuscles were of the spear-shaped, lunated, and sigmoidal forms, described and figured from the blood of some other *Cervidæ* in the Lond. and Edin. Philosophical Magazine, November 1840, p. 329, and noticed in my Appendix to Gerber's Anatomy, p. 11 to 12: there were also many of the common circular corpuscles. The blood-corpuscles of a new species of Brocket Deer (a male, from Brazil) were of the usual circular shape. In the magazine above-cited it is suggested that those irregular forms may result from changes in the common circular discs; and this now appears more probable from the

facts just mentioned. The cause of these curious changes in the shape of the blood-discs is well-deserving of further inquiry.

The blood-corpuscles of the Aurochs are scarcely distinguishable in any respect from those of its congener the Bison and of some other large ruminants.

Of the *Edentata*, as far as can be inferred from the few yet examined, the mean size of the blood-corpuscles is larger than in mammals generally. And in the genus *Bradypus*, as fully explained in the Proceedings of the Zoological Society, June 11, 1844, I found those corpuscles larger than any yet observed in Mammalia, with the single exception of those of the Elephant. This large size of the blood-corpuscles of the Sloth is confirmed by the measurement now given of them, from a younger animal than that which afforded me the blood for the former observations.

Judging from the facts at present ascertained, the marsupial animals appear to agree in the size and form of the blood-corpuscles with the corresponding placental Mammalia, as mentioned in my notice in the Dublin Medical Press, November 1839, and in the Proceedings of the Zoological Society, June 8, 1841. But in the Marsupials further observations are required. The measurement now given of the blood-corpuscles of the Crab-eating Opossum accords with the view just stated.

The following measurements of the blood-corpuscles of Birds tend to confirm the result which I have before published, that in this entire class the law for the size of the corpuscles is the same as in a single family of Mammalia; and that the short diameter of the oval blood-corpuscles of Birds has a general correspondence with the diameter of the circular blood-corpuscles of mammals.

Through the kindness of Dr. Andrew Smith, I am enabled to add measurements of the blood-corpuscles of such reptiles as were alive some time since in his very interesting and valuable collection.

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|--|------------------------------|
| Laland's Megalotis (<i>Otocyon Lalandii</i> , [Desm.] | 1-3600 |
| Meminna Deer (<i>Moschus Meminna</i> , Erxl.) | 1-12325 |
| Red Brocket Deer (<i>Cervus nemorivagus</i> , Cuv.) | 1-7060 |
| A Brocket Deer (<i>Cervus</i> —a new species) | 1-7125 |
| Aurochs (<i>Bos Urus</i> , Bodd.) | 1-4074 |
| A young Sloth (<i>Bradypus didactylus</i> , Linn.) | 1-2778 |
| Anteater (<i>Echidna hystrix</i> , Cuv.) | 1-3300 |
| Crab-eating Opossum (<i>Didelphis cancrivora</i> , Temm.) | 1-3436 |
| Red-legged Falcon (<i>Falco rufipes</i> , Bechst.) | { L.D. 1-2000 S.D. 1-3790 |
| Long-eared Owl (<i>Otus vulgaris</i> , Flem.) | { L.D. 1-1830 S.D. 1-3400 |
| Little Owl (<i>Strix passerina</i> , Temm.) | { L.D. 1-1885 S.D. 1-3555 |
| Red-backed Shrike (<i>Lanius collurio</i> , Linn.) | { L.D. 1-2230 S.D. 1-3878 |
| Cassowary (<i>Casuarus emu</i> , Lath.) | { L.D. 1-1455 S.D. 1-2800 |
| Great Bustard (<i>Otis tarda</i> , Linn.) | { L.D. 1-1811 S.D. 1-3200 |

| | | | |
|---|---|------|--------|
| Houbara Bustard (<i>Otis houbara</i> , Gmel.) | { | L.D. | 1-1814 |
| | | S.D. | 1-3200 |
| Three-keeled Emys (<i>Emys trijuga</i> , Schw.) .. | { | L.D. | 1-1333 |
| | | S.D. | 1-1909 |
| Caspian Emys (<i>Emys Caspica</i> , Schweig.) | { | L.D. | 1-1103 |
| | | S.D. | 1-2000 |
| <i>Testudo mauritanica</i> , Dum. & Bib. | { | L.D. | 1-1280 |
| | | S.D. | 1-2000 |
| <i>Testudo tabulata</i> , Walbaum | { | L.D. | 1-1143 |
| | | S.D. | 1-2000 |
| <i>Gymnopus Ægyptiacus</i> , Geoff.; <i>labiatus</i> , Bell | { | L.D. | 1-1143 |
| | | S.D. | 1-2000 |
| <i>Morelia Argus</i> , Dum. & Bib. | { | L.D. | 1-1371 |
| | | S.D. | 1-1685 |
| Proteus (<i>Proteus anguinus</i> , Laur.) | { | L.D. | 1-400 |
| | | S.D. | 1-727 |
| Common Trout (<i>Salmo fario</i> , Linn.) | { | L.D. | 1-1524 |
| | | S.D. | 1-2900 |
| Grayling (<i>Thymallus vulgaris</i> , Nilss.) | { | L.D. | 1-1684 |
| | | S.D. | 1-2900 |

ON SEVEN NEW SPECIES OF AUSTRALIAN BIRDS.

BY JOHN GOULD, F.R.S. ETC.

GRAUCALUS HYPOLEUCUS.

Lores black; crown of the head and all the upper surface dark grey; wings and tail black; chin, under surface of the wings, abdomen and under tail-coverts white; breast pale greyish white; irides brownish black; bill blackish brown; legs and feet black; insides of the feet and spaces between the scales of the tarsi mealy grey.

Total length 9 inches; bill $1\frac{1}{8}$; wing $5\frac{3}{4}$; tail $4\frac{3}{4}$; tarsi 1.

Hab. Port Essington.

Remark.—Distinguished from all the other Australian members of the genus by the whiteness of the under surface.

LIMOSA UROPYGIALIS.

All the upper surface brownish grey, becoming dark brown in the centre and nearly white on the edges of the feathers; primaries brown, with white shafts; rump and upper tail-coverts conspicuously barred with brown and white; tail alternately barred with brown and white; throat and abdomen white; neck and breast brownish grey; under wing-coverts and flanks barred with brown and white; bill white at the base, becoming brown at the tip; irides dark brown; legs brownish black.

Total length 15 inches; bill $3\frac{1}{4}$; wing $8\frac{3}{4}$; tail $3\frac{1}{4}$; tarsi $2\frac{1}{8}$.

Hab. Australia.

Remark.—Distinguished from *Limosa rufa* by the rump being barred instead of white as in that species. The female is about a third larger in all her admeasurements than the male.

CHARADRIUS VEREDUS.

Crown of the head and all the upper surface brown, each feather

narrowly fringed with buff; primaries blackish brown, the shaft of the first white; tail brown, narrowly edged with white, the brown colour gradually fading as the feathers recede from the centre; face, a broad stripe over the eye, and the chin, buffy white; sides and back of the neck, and the breast, buffy brown; abdomen and under surface white; irides very dark brown; legs and feet brownish flesh-colour; bill dark brown.

Total length $8\frac{1}{2}$ inches; bill $1\frac{1}{8}$; wing $6\frac{1}{2}$; tail $2\frac{1}{8}$; tarsi 2.

Hab. Northern Australia.

Remark.—This species exhibits characters pertaining both to the true Plovers and to the Coursers, and would seem therefore to have just claims to be made the type of a new genus; but before separating it, it will be necessary to know something of its habits, and also if it undergoes any periodical change of plumage.

TOTANUS GRISEOPYGIUS.

Head, all the upper surface, rump and tail, greyish brown; primaries dark brown; line over the eye and all the under surface white; the neck, breast and flanks strongly freckled with brown; irides reddish brown; bill blackish brown, except the base of the under mandible, which is scarlet; legs and feet hyacinth-red.

In winter the upper surface is of a much lighter hue, and the under surface is of a greyish white and destitute of the brown freckles.

Total length $8\frac{3}{4}$ inches; bill $1\frac{3}{4}$; wing $6\frac{3}{4}$; tail $2\frac{7}{8}$; tarsi $1\frac{1}{4}$.

Hab. Port Essington.

Remark.—Distinguished by the uniform grey colouring of the rump and upper tail-coverts.

SCHÆNICLUS MAGNUS.

Crown of the head, and the neck, brownish grey, each feather with a stripe of brown down the centre; back and wings brown, broadly margined with brownish grey; primaries blackish brown; rump white, each feather tipped with brown; tail brownish grey; feathers of the breast dark brown, with a crescent of white at the extremity; abdomen and under tail-coverts white; flanks mottled with brown; bill, feet, and irides, olive.

Total length $9\frac{1}{2}$ inches; bill $1\frac{3}{4}$; wing 7; tail $2\frac{1}{4}$; tarsi $1\frac{3}{8}$.

Hab. Australia.

Remark.—Of this species of *Schœniclus*, which is distinguished by its large size, the only examples that have come under my notice are in the British Museum, and a second in the possession of the Hon. Charles Neville, to whom I am indebted for the loan of it for illustration in my 'Birds of Australia.'

ARDETTA MACRORHYNCHA.

Crown of the head and occipital crest black, with green reflexions; neck, all the upper surface and wing-coverts greenish olive; wing-coverts narrowly margined with deep rufous; primaries and tail slate-grey; spurious wing, secondaries and all but the three or four external primaries with an irregular triangular-shaped spot at the tip; down the centre of the throat a series of oblong marks of dark brown and white, forming a conspicuous mottled stripe, continued into the

breast, where it is lost in the mingled grey and buffy brown of the abdomen; upper mandible dark reddish brown; basal portion of the lower one oil-green; tibiæ and hinder part of the tarsi bright yellow; remainder of the legs and feet yellowish brown.

Total length 17 inches; bill $3\frac{3}{4}$; wing $7\frac{3}{4}$; tail 3; tarsi $2\frac{1}{8}$.

Hab. East coast of Australia.

Remark.—Differs from the *Ardetta Javanica* in being considerably larger in size and in the great size of its head and bill.

CRACTICUS PICATUS.

Collar at the back of the neck, centre and edge of the wing, rump, abdomen, under tail-coverts and tips of all but the centre tail-feathers white; remainder of the plumage deep black; irides dark reddish brown; bill ash-grey, the tip black; legs and feet dark greenish grey.

Total length 10 inches; bill $1\frac{3}{4}$; wing 6; tail $4\frac{3}{4}$; tarsi $1\frac{1}{4}$.

Hab. Northern Australia.

Remark.—A miniature representative of, and nearly allied to, but distinct from, *Cracticus nigrogularis*.

March 14.—Dr. Gamble in the Chair.

The following papers were read:—

1. DIAGNOSES SPECIERUM NOVARUM GENERIS PLANORBIS COLLECTIONIS CUMINGIANÆ. AUCTORE GUIL. DUNKER, DRE.

1. PLANORBIS INFLATUS, Dkr. *Pl. testâ magnâ, inflatâ, fusco-olivaceo- et cinereo-corneâ, nitidâ, striatâ, suprâ profundè umbilicatâ, infrâ concavâ, anfractibus 4 inflatis celerrimè crescentibus; aperturâ reniformi; fauce fuscâ.*

Diam. max. $1'' 1'''$; alt. aperturæ $8'''$.

Species tum colore, tum habitu varietatibus quibusdam *Pl. cornei*, simillima. Anfractus primordiales striis spiralibus insignes.

Patria cochleæ eximiæ ignota est.

2. PLANORBIS NITIDULUS, Dkr. *Pl. testâ parvulâ, pallidè corneo-fulvescente, nitidulâ, pellucidâ, suprâ profundè umbilicatâ, basi planâ; anfractibus $3\frac{1}{2}$ rotundatis; aperturâ obliquè ovatâ.*

Diam. max. $1\frac{3}{4}'''$; alt. $\frac{1}{2}'''$.

Species hæc parvula basi planâ et latere superiore umbilicato noscenda, in Chersoneso aureâ (pæninsula Malacca) plantis aquaticis insidens reperta est. (H. Cuming.)

3. PLANORBIS GILBERTI, Dkr. *Pl. testâ depressâ, sublenticulari, pallidè corneâ, nitidâ, pellucidâ, superâ paginâ planiusculâ, infernè umbilicatâ; anfractibus tribus utrinque obtusè angulatis; infrâ medium acutè carinatis; aperturâ obliquâ, subcordatâ; margine superiore producto.*

Diam. max. $2\frac{1}{2}'''$; alt. $\frac{3}{4}'''$.

Species *Planorbi exacuto*, Say., similis, differt vero umbilico latiore, foveolâ lateris superioris medianâ, et carinâ obtusâ in superâ et inferâ anfractuum paginâ. Reportata est e Novâ Hollandiâ à cl. Gilbert.

4. PLANORBIS CHINENSIS, Dkr. *Pl. testâ parvâ, corneâ, subtiliter striatâ, subdiaphand, paginâ superâ convexiusculâ, medio impressâ,*

paginâ inferâ latè umbilicatâ; anfractibus $3\frac{1}{2}$ ovatis medio subcarinatis; aperturâ obliquâ, subcordatâ.

Diam. max. $2\frac{1}{4}$ ''' ; alt. $\frac{2}{3}$ '''.

Species hæc à cl. H. Cuming in rivulo ad Hong Kong in China detecta, *Pl. deformi*, Lam., similis, sed carinâ obsoletâ et latere superiore minus convexo diversa.

5. PLANORBIS PANAMENSIS, Dkr. *Pl. testâ parvulâ, albidâ vel pallidè cornedâ, diaphandâ, haud nitente, striis tenuissimis confertis lineisque spiralibus remotis et obsoletis subdecussatâ, suprâ planoconvexâ, medio impressâ, infrâ umbilicatâ; anfractibus $2\frac{1}{2}$ —3 ovatis; aperturâ obliquâ.*

Diam. max. $1\frac{1}{2}$ ''' ; alt. $\frac{1}{2}$ '''.

Hab. in rivulis ad Panama (H. Cuming). Magnam affinitatem præbet cum *Pl. elevato*, Adams.

6. PLANORBIS HINDSIANUS, Dkr. *Pl. testâ parvulâ, cornedâ, subviridescente, tenuissimè confertimque striatâ, diaphandâ, subnitidâ, suprâ planiusculâ, medio impressâ, infrâ umbilicatâ; anfractibus tribus ovatis; aperturâ obliquâ.*

Species magnitudine ferè præcedentis, sed colore et striis spiraliibus deficientibus satis diversa.

Hab. in insulâ Puna in sinu ad Guayaquil (R. B. Hinds).

7. PLANORBIS OBESUS, Dkr. *Pl. testâ solidâ, tenuiter densèque striatâ, nitidâ, subsericeâ, fusco- seu luteo-cornedâ, utrinque concavâ; anfractibus $3\frac{1}{2}$ —4 tumidis celeriter crescentibus, aperturâ subreniformi, labro intus subincrassato.*

Diam. max. 7''' ; alt. $3\frac{1}{4}$ '''.

Pl. trivolti, Say., affinis, sed striis subtilioribus, aperturâ minore, testâ crassiore et carinâ in latere basali deficiente distincta.

Patria ignota.

8. PLANORBIS CUMINGIANUS, Dkr. *Pl. testâ magnâ, discoidedâ, crassiusculâ, suprâ cornedâ subrufâ, infrâ olivaceâ, nitidâ, obsoletissimè striatâ, ferè glabratâ, utrinque concavâ; anfractibus senis ovatis, suturâ profundâ divisis; aperturâ obliquâ, ovato-sublunatâ.*

Diam. max. 1" $1\frac{1}{3}$ ''' ; alt. 3'''.

Planorbi olivaceo simillimus, sed colore, testâ crassiore, splendidiore ferè glabratâ, umbilico latiore, anfractibus convexioribus minus involutis aliisque notis bene distinguendus.

Patria ignota.

9. PLANORBIS SIBIRICUS, Dkr. *Pl. testâ parvâ, tenui, pallidè cornedâ, subtilissimè striatâ, suprâ planiusculâ, medio impressâ, infrâ concavâ; anfractibus $3\frac{1}{2}$ ovatis, modicè crescentibus, suturâ distinctâ divisis; aperturâ obliquâ, ovatâ.*

Diam. max. 2''' ; alt. $\frac{1}{2}$ '''.

Pl. albo affinis, sed colore et capillis deficientibus diversus.

Hab. in Sibirîâ.

10. PLANORBIS FOKKESII, Dkr. *Pl. testâ parvâ, albidâ, subcorneâ, nitidâ, diaphandâ, suprâ planoconvexâ seu plandâ, medio profundè*

impressâ, infrâ umbilicatâ; anfractibus tribus subtumidis, celeriter ferè crescentibus tenuiterque striatis, ultimo declinato; aperturâ subrotundâ, perobliquâ, margine superiore producto.

Diam. max. $2\frac{1}{2}$ ''' ; alt. 1'''.

Patria ignota.

11. PLANORBIS FUSCUS, Dkr. *Pl. testâ tenui, fuscâ, subtilissimè longitudinaliter transversimque striatâ, suprâ convexiusculâ, infrâ concavâ, latere utroque umbilicatâ; anfractibus $2\frac{1}{2}$ teretibus, subceleriter crescentibus, ultimo pauld descendente; aperturâ rotundatâ.*

Diam. max. $3\frac{1}{2}$ ''' ; alt. $1\frac{1}{4}$ '''.

Tria hujus speciei exemplaria plane congruentia exstant, quæ cl. Cuming in paludibus ad Valparaiso invenit.

12. PLANORBIS SERICEUS, Dkr. *Pl. testâ majusculâ, tenuissimè decussatâ, fusco-corned, interdum luteo-albidâ, nitore sericeo insigni, superâ et inferâ paginâ concavâ; anfractibus quinque albis utrinque carinatis; aperturâ obliquâ, ferè semilunatâ, infrâ et suprâ angulatâ.*

Diam. max. 7''' ; alt. 3'''.

Testa *Pl. tenagophilo*, Orb., affinis, sed magis involuta et regularis. Patria ignota.

13. PLANORBIS STRAMINEUS, Dkr. *Pl. testâ tenuistriatâ, nitidâ, parùm diaphanâ, stramineâ, subcorned, suprâ plano-concavâ, medio impressâ, infrâ umbilicatâ; anfractibus 4 subrotundis; aperturâ dilatatâ, ferè rotundatâ.*

Diam. max. 5''' ; alt. ferè 2'''.

Primo aspectu Helicibus quibusdam similis, ex. gr. *Helici ericetorum*.

Patria America australis (H. Cuming).

14. PLANORBIS RUPPELLII, Dkr. *Pl. testâ opacâ, tenuiter striatâ, pallidè corned, subcinereâ, suprâ umbilicatâ, infernè concavâ, anfractibus 4 ovatis modicè crescentibus; aperturâ ovatâ, obliquâ.*

Diam. max. 6''' ferè; alt. 2'''.

Patria Habessinia (Rüppell).

15. PLANORBIS LIMOSUS, Dkr. *Pl. testâ cinereo-corned, opacâ, striatâ, subcarinatâ, suprâ convexiusculâ, medio impressâ, infrâ umbilicatâ; anfractibus tribus ovatis; aperturâ obliquâ, subovali; faucibus subflavis.*

Diam. max. 3''' ; alt. 1'''.

Hæc species *Pl. deflectum* Sayi in mentem vocat.

Hab. in Asiâ minore (H. Spratt).

16. PLANORBIS PHILIPPIANUS, Dkr. *Pl. testâ discoideâ, subnitidâ, tenuissimè obsoletèque striatâ, pallidè corned, diaphanâ, suprâ planatâ, medio impressâ, infrâ parùm concavâ; anfractibus senis rotundatis sensim crescentibus; aperturâ subrotundâ, subobliquâ.*

Diam. max. $5\frac{1}{2}$ ''' ; alt. $1\frac{1}{4}$ '''.

Patria Cochabamba in Boliviaâ.

2. SOME OBSERVATIONS ON *MYODES HUDSONICUS* AND THE OTHER SPECIES OF THE GENUS *MYODES*. BY J. E. GRAY, ESQ., F.R.S. ETC.

The Governor of the Hudson's Bay Company having kindly sent to the British Museum the extensive series of Mammalia, Birds and Fish collected by Dr. J. Rae in his late very interesting journey, I have been induced to lay before the Society some remarks on the species of the genus *Myodes*, which I hope will tend to elucidate the history of these interesting animals.

Myodes Hudsonicus has been distinguished as a species by the large size and peculiar form of the claws on the front feet; but the specimen contained in this collection appears to prove that these large claws are only found in some individuals, or more likely in only one sex, and that the other individuals or sex have small, curved, sharp claws, like the typical species of the genus; and this also appears to be the case with *Myodes helvolus*, Richardson, for one specimen in the collection has the small typical claws which Sir John Richardson assigns to the species, and the other has very large, thick, rounded, bluntly truncated claws on the fore-feet, which is probably the character of the males.

The species of the genus in the British Museum may be thus divided:—

I. The upper cutting teeth narrow, smooth, without any longitudinal grooves. Thumb with a compressed, curved, acute claw.

a. Claws of fore-feet simple; curved.

M. Lemurus, two specimens; Sweden.

M. helvolus, Richardson, one specimen.

b. Claws of fore-feet of some (males?) specimens compressed above, with a round, dilated, expanded pad beneath.

M. Grænländicus. Fur with a dorsal streak.

c. Claws of fore-feet of some (males?) specimens very large, compressed, strap-shaped, and with a deep triangular notch at the end.

M. Hudsonicus.

II. The upper cutting teeth broader, with a central longitudinal groove; claws of the thumb strap-shaped, truncated, and notched at the tip.

M. helvolus, Rich. Claws of some specimens (males?) thick, subcylindrical, curved, truncate.

M. trimucronatus, Rich., two specimens. Claws of both specimens similar, acute, curved.

3. DESCRIPTION OF A NEW SPECIES OF ANATIFA. BY J. E. GRAY, ESQ., F.R.S. ETC. ETC.

In the collection of my friend Mr. Joseph Fryer, of Whitley House, Northumberland, I have observed a very interesting new species of this genus, which was given him by Mr. Hewitson, who found it attached to a *Gorgonia* in Madeira.

It is interesting as having the solid, thick, ventricose valves of

Mr. Hinds's genus *Trilasmis*, and it also resembles that genus in the anterior basal and the upper opercular valves being very small, so that it forms the passage between *Pentalasmis* and that genus.

There are in Mr. Fryer's collection two specimens, which differ considerably from one another. One is pale red and elongate-ovate, smooth, rather compressed, and the larger opercular valves have a rather distinct line towards the extremity. The anterior basal valve is much-compressed. The second is yellowish white, pink at the base, ovate, swollen, slightly radiately and concentrically striated; the left larger opercular valve is larger than the right one, more convex, and partly inclosing it; the anterior valve and upper opercular valve are very narrow.

I propose to call the species *Anatifa crassa*. Peduncle short; valves thick, opaque, convex, large, the anterior basal valve and upper opercular valves very narrow.

Inhab. Madeira, on *Gorgonia*.

MISCELLANEOUS.

How to prevent the Attacks of the Bed-bug, Cimex lectularius.

By WALTER WHITE, Esq.

To Richard Taylor, Esq.

Nov. 6, 1848.

SIR,—May I be permitted to offer a few remarks on the communication "How to prevent the Attacks of the Bed-bug" in your last number?

It is in no depreciatory spirit that I say the means recommended are not new: more than twenty years ago I met with instances of inverted cones of glass being used as bases for bedposts; sometimes the entire leg below the framing was glass, or it stood in a glass vessel lined with a viscous fluid. Similar instances have repeatedly come to my knowledge since, and I may add that due precautions were taken to isolate the bedstead, by keeping the curtains and draperies clear of wall and floor.

In spite of such precautions bugs *will* get into bedsteads, much to the wonder of those ignorant of the reason why. I learnt it by experience during a five years' residence in New York, the head-quarters of bugs. I slept on a French bedstead, having no hangings, and placed quite free from all contact except the points by which it touched the floor. It was well searched every day, a necessary precaution where the thermometer is sometimes at 90° after sunset, yet bugs found their way into the bed. They effected their entrance by crawling up the walls and along the ceiling until over the bed, when they let themselves fall, probably aware that the shock would not be fatal. My attention was first drawn to the fact by the descent of one of the loathsome creatures into my mouth, while I was lying in a dose in the dim twilight of a summer morning: after this nauseous experience I several times observed the fall of bugs. If surprised by